ELSEVIER

Protein Structure and Molecular Enzymology

Vol. 1429, 1999

BIOCHIMICA ET BIOPHYSICA ACTA
BBA

Cumulative Contents

Information for Contributors vii

Review

Pyroglutamyl peptidase: an overview of the three known enzymatic forms
P.M. Cummins and B. O'Connor (Ireland) 1

Regular papers

Solution structure of a fragment of the dimerization domain of DP-1 determined by ^{1}H-nuclear magnetic resonance and distance geometry
S. Guang, J. Wu, T. Yu, Y. Xia and Y. Shi (PR China) 18

D-Arabinose dehydrogenase and its gene from *Saccharomyces cerevisiae*
S.-T. Kim, W.-K. Huh, B.-H. Lee and S.-O. Kang (South Korea) 29

Two-dimensional crystals of reconstituted β-subunits of the chaperonin TF55 from *Sulfolobus shibatae*
P.J.B. Koeck, H.K. Kagawa, M.J. Ellis, H. Hebert and J.D. Trent (Sweden, USA) 40

Protein-protein interactions in the assembly of *Shigella flexneri* invasion plasmid antigens IpaB and IpaC into protein complexes
R. Davis, M.E. Marquart, D. Lucius and W.D. Picking (USA) 45

Organization of microfibrils in keratin fibers studied by X-ray scattering
F. Briki, B. Busson and J. Doucet (France) 57

Hydrophilic Thr can replace the hydrophobic and absolutely conservative A3Val in insulin
H. Chen and Y.-M. Feng (PR China) 69

Identification and mapping of linear antigenic determinants of chicken riboflavin carrier protein
S. Subramanian and P.R. Adiga (India) 74

6-Phosphogluconate dehydrogenase: the mechanism of action investigated by a comparison of the enzyme from different species
M. Rippa, P.P. Giovannini, M.P. Barrett, F. Dallocchio and S. Hanau (Italy, UK) 83

Interaction of adenosine nucleotide analogs with *Saccharomyces cerevisiae* phosphoenolpyruvate carboxykinase
L. Carrasco, F.D. González and E. Cardemil (Chile) 93

Binding sites for the (Hg-Se) complex on selenoprotein P
K.T. Suzuki, C. Sasakura and S. Yoneda (Japan) 102

Statistical analysis of predicted transmembrane α-helices
I.T. Arkin and A.T. Brunger (USA) 113

Direct evidence of the generation in human stomach of an antimicrobial peptide domain (lactoferricin) from ingested lactoferrin
H. Kuwata, T.-T. Yip, M. Tomita and T.W. Hutchens (Japan, USA) 129

X-ray studies on two forms of bovine β-trypsin crystals in neat cyclohexane
G. Zhu, Q. Huang, Z. Wang, M. Qian, Y. Jia and Y. Tang (PR China) 142

Primary structure of two major cuticular proteins from the migratory locust, *Locusta migratoria*, and their identification in polyacrylamide gels by mass spectrometry
C. Jensen, S.O. Andersen and P. Roepstorff (Denmark) 151

Determination of zero-field splitting and evidence for the presence of charge-transfer transitions in the Soret region of high-spin ferric hemoproteins obtained from an analysis of low-temperature magnetic circular dichroism
V.S. Oganesyan and Y.A. Sharonov (Russia) 163

Identification by site-directed mutagenesis of amino acid residues in ribosomal protein L2 that are essential for binding to 23S ribosomal RNA
N. Harada, K. Maemura, N. Yamasaki and M. Kimura (Japan) 176

Sidechain and backbone requirements for anti-invasive activity of laminin peptide 11
J.R. Starkey, S. Dai and E.A. Dratz (USA) 187

Purification and analysis of RTI40, a type I alveolar epithelial cell apical membrane protein
R.F. Gonzalez and L.G. Dobbs (USA) 208

The fibrinogen RIBS-I epitope (γ373–385) appears proximate to the γ408–411 adhesive domain but is not involved in interaction between receptor-bound or surface-adsorbed fibrinogen and platelet GPIIbIIIa
Q. Liu and M.M. Frojmovic (Canada) 217

Control of mitochondrial β-oxidation: sensitivity of the trifunctional protein to [NAD^+]/[NADH] and [acetyl-CoA]/[CoA]
S. Eaton, B. Middleton and K. Bartlett (UK) 230

Isolation, properties and N-terminal amino acid sequence of a factor V activator from *Vipera lebetina* (Levantine viper) snake venom
E. Siigur, M. Samel, K. Tõnismägi, J. Subbi, T. Reintamm and J. Siigur (Estonia) 239

Threonine 82 in the regulatory chain is important for nucleotide affinity and for the allosteric stabilization of *Escherichia coli* aspartate transcarbamoylase
M.K. Williams and E.R. Kantrowitz (USA) 249

Amoebapore homologs of *Caenorhabditis elegans*
L. Bányai and L. Patthy (Hungary) 259

Thiol–disulfide redox buffers maintain a structure of immunoglobulin A that is essential for optimal in vitro binding to secretory component
R.M.L. Jones, F. Schweikart, S. Frutiger, J.-C. Jaton and G.J. Hughes (Switzerland) 265

Involvement of essential cysteine and histidine residues in the activity of isolated glutaminase from tumour cells
J.A. Campos, J.C. Aledo, A. del Castillo-Olivares, A.E. del Valle, I. Núñez de Castro and J. Márquez (Spain) 275

Short sequence-paper

Cloning and bacterial expression of adenosine-5′-triphosphate sulfurylase from the enteric protozoan parasite *Entamoeba histolytica*
T. Nozaki, T. Arase, Y. Shigeta, T. Asai, T. Leustek and T. Takeuchi (Japan, USA) 284

Information for Contributors *vii*

Regular papers

Protein folding in *Escherichia coli*: role of 23S ribosomal RNA
S. Chattopadhyay, S. Pal, D. Pal, D. Sarkar, S. Chandra and C. Das Gupta (India) 293

The binding of 3,6-disubstituted bile salts to human serum albumin induces conformational change on the molecule of this protein
B. Farruggia and G.A. Picó (Argentina) 299

Investigation of the role of surface residues in the ferredoxin from *Clostridium pasteurianum*
P.S. Brereton, M.J. Maher, P.A. Tregloan and A.G. Wedd (Australia) 307

Time-resolved fluorescence of *O*-acetylserine sulfhydrylase
S. Benci, S. Vaccari, A. Mozzarelli and P.F. Cook (Italy, USA) 317

Cloning of a cDNA encoding SjIrV1, a *Schistosoma japonicum* calcium-binding protein similar to calnexin, and expression of the recombinant protein in *Escherichia coli*
C.W. Hooker and P.J. Brindley (Australia) 331

The oligomeric state of *Bacillus thuringiensis* Cry toxins in solution
L. Güereca and A. Bravo (Mexico) 342

X-ray absorption spectroscopy of cadmium phytochelatin and model systems
I.J. Pickering, R.C. Prince, G.N. George, W.E. Rauser, W.A. Wickramasinghe, A.A. Watson, C.T. Dameron, I.G. Dance, D.P. Fairlie and D.E. Salt (Australia, Canada, USA) 351

Thermal unfolding of chitosanase from *Streptomyces* sp. N174: role of tryptophan residues in the protein structure stabilization
Y. Honda, T. Fukamizo, T. Okajima, S. Goto, I. Boucher and R. Brzezinski (Canada, Japan) 365

Parameter estimation using a direct solution of the integrated Michaelis-Menten equation
C.T. Goudar, J.R. Sonnad and R.G. Duggleby (Australia, USA) 377

Cold denaturation of ubiquitin
B. Ibarra-Molero, G.I. Makhatadze and J.M. Sanchez-Ruiz (Spain, USA) 384

Investigation of the binding interactions of progesterone using muteins of the human progesterone receptor ligand binding domain designed on the basis of a three-dimensional protein model
M. Letz, P. Bringmann, M. Mann, A. Mueller-Fahrnow, D. Reipert, P. Scholz, J.-M. Wurtz and U. Egner (France, Germany) 391

High expression and steady-state kinetic characterization of methionine site-directed mutants of *Escherichia coli* methionyl- and selenomethionyl-dihydrofolate reductase
D. Shaw, J.D. Odom and R.B. Dunlap (USA) 401

Thermodynamics of nucleotide interactions with the *Azotobacter vinelandii* nitrogenase iron protein
W.N. Lanzilotta, V.D. Parker and L.C. Seefeldt (USA) 411
Polyol-induced activation by excess substrate of the D70G butyrylcholinesterase mutant
V. Levitsky, W. Xie, M.-T. Froment, O. Lockridge and P. Masson (France, USA) 422
Partial sequence of human platelet heparitinase and evidence of its ability to polymerize
G.V. Gonzalez-Stawinski, W. Parker, Z.E. Holzknecht, N.S. Huber and J.L. Platt (USA) 431
Purification and characterization of a new enzyme, *N*-alkylglycine oxidase from *Cladosporium* sp. G-10
K. Gomi and T. Horiuchi (Japan) 439
Glycerol's influence on the oxidized insulin B-chain conformation in relation to the selectivity variation of subtilisin: an nuclear magnetic resonance and simulated annealing study
F.-Y. Dupradeau, G. Le Flem, J.-M. Wieruszeski, M. Calin, V. Larreta-Garde and J.-P. Monti (France) 446
Altering the state of phosphorylation of rat liver keratin intermediate filaments by ethanol treatment in vivo changes their structure
W.R. Sanhai, B.S. Eckert and P.L. Yeagle (USA) 459
High density lipoprotein (HDL), and not albumin, is the major palmitate binding protein in New Zealand long-finned (*Anguilla dieffenbachii*) and short-finned eel (*Anguilla australis schmidtii*) plasma
V.J. Metcalf, S.O. Brennan, G. Chambers and P.M. George (New Zealand) 467
A comparative molecular field analysis study on several bioactive peptides using the alignment rules derived from identification of commonly exposed groups
T.-H. Lin, J.-J. Lin and Y.-J. Lu (Taiwan) 476
Dynamic equilibrium unfolding pathway of human tumor necrosis factor-α induced by guanidine hydrochloride
Y.-R. Kim, J.-S. Hahn, H. Hong, W. Jeong, N.W. Song, H.-C. Shin and D. Kim (South Korea) 486

Rapid reports

Tripeptidyl-peptidase I is apparently the CLN2 protein absent in classical late-infantile neuronal ceroid lipofuscinosis
N.D. Rawlings and A.J. Barrett (UK) 496
The prolyl aminopeptidase from *Lactobacillus delbrueckii* subsp. *bulgaricus* belongs to the α/β hydrolase fold family
F. Morel, C. Gilbert, C. Geourjon, J. Frot-Coutaz, R. Portalier and D. Atlan (France) 501

Short crystallisation paper

Purification, crystallisation and preliminary X-ray diffraction study of ribosome inactivating protein: saporin
M. Kumar, S. Dattagupta, K.K. Kannan and M.V. Hosur (India) 506

Short sequence-papers

cDNA sequence and overexpression of chloroplast chaperonin 21 from *Arabidopsis thaliana*
T. Hirohashi, K. Nishio and M. Nakai (Japan) 512
Cloning of a novel prolidase gene from *Aureobacterium esteraromaticum*
T. Kabashima, M. Fujii, Y. Hamasaki, K. Ito and T. Yoshimoto (Japan) 516